

Umetco Minerals Corporation



PO BOX 66 137 47th STREET • NIAGARA FALLS NEW YORK 14302

June 23, 1987

Mr John P Spath
Acting Program Director
Low-Level Radioactive Waste Disposal
New York State
Energy Research and Development Authority
Two Rockefeller Plaza
Albany, NY 12223

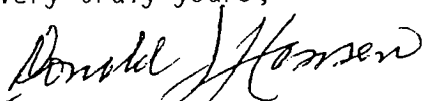
Dear Mr Spath

Enclosed is the completed Low-Level Radioactive Waste Report Form that you sent me on June 17, 1987

The Umetco Facilities at Niagara Falls were sold in 1986, possibly because of this I did not receive your first letter of March 27 The low-level waste that we disposed of in 1986 was contaminated soil and slag resulting from operations that were discontinued several years ago

The cleanup was completed after consultation with Robert Kelly of the New York State Department of Labor prior to termination of our Radioactive Material License No 950-0139. There will be no more shipments of waste from Umetco

Very truly yours,


✓ D J Hansen permanent file

BC
T J K
J. + Hunt

UCCNHT0003192

NOTE - Please refer to the INSTRUCTIONS before attempting to complete this form. Also see Public Authorities Law, Section 1854 d(1) and Part 502 of Chapter XI of Title 21 NYCRR (Reporting Regulations) provided with this form.
FOR THE PERIOD JANUARY 1 THROUGH DECEMBER 31, 1986

SECTION I Generator Information

A FACILITY WHERE LLRW WAS GENERATED CODE (official use only)

UMETCO MINERALS CORPORATION

STREET ADDRESS

P. O. Box 579

CITY

Niagara Falls

COUNTY

Niagara

STATE

NY

ZIP CODE

14303

B NAME OF CONTACT PERSON AT THE FACILITY

Donald J. Hansen

TITLE

Retired

TELEPHONE

(716) 754-7906

C NAME AND PRINCIPAL OFFICE OF GENERATOR IF DIFFERENT FROM PART A IF SAME ENTER SAME

SAME

STREET ADDRESS

CITY

COUNTY

STATE

ZIP CODE

D DID CONTACT PERSON IDENTIFIED IN PART B
PREPARE THIS REPORT?

☒ YES

☐ NO Identify preparer below

PREPARER'S NAME

TITLE

TELEPHONE

()

E IDENTIFY ALL RADIOACTIVE MATERIAL AND NUCLEAR FACILITY LICENSES, BY LICENSE NUMBER UNDER WHICH LLRW WAS GENERATED

LICENSING AGENCY

LICENSE NUMBER

New York State Department of Health

New York State Department of Labor

950-0139

New York City Department of Health

U S Nuclear Regulatory Commission

F IDENTIFY BY NUMBER AND ISSUING AUTHORITY PERMITS YOU HOLD WHICH AUTHORIZE TRANSFER OF LLRW TO A LICENSED LLRW DISPOSAL FACILITY

ISSUING AUTHORITY

AUTHORIZATION NUMBER

South Carolina Dept. of Health & Environmental
Control

0226-31-86-X

G REFER TO THE INSTRUCTION BOOKLET TO DETERMINE THE FACILITY TYPE CODE
WHICH BEST DESCRIBES YOUR FACILITY, AND ENTER HERE

FACILITY
TYPE CODE

H 11

H BRIEFLY DESCRIBE THE ACTIVITIES, PROCESSES, OR USES OF RADIOACTIVE MATERIAL WHICH RESULT IN THE GENERATION OF LLRW AT YOUR FACILITY

Production of ferro-columbium and ferro-tantalum resulted in concentration of

natural uranium and thorium in slag. The process was discontinued years ago--;

the current material was from contaminate soil around the furnace and some ore

and slag samples

I WERE TWO OR MORE PERSONS GENERATORS OF THE SAME LLRW (e.g., an employer and an employee)? ☒ NO Skip to Section II
☐ YES Complete the rest of this question

1 IDENTIFY THE ONE PERSON DESIGNATED TO SUBMIT THIS REPORT

☐ Same as Section I, Part B ☐ Same as Section I, Part C ☐ Same as Section I, Part D
☐ Other (specify) NAME TELEPHONE ()

2 ON TABLE 1 IDENTIFY THE GENERATORS WHO ARE NOT SUBMITTING THE REPORT FORM AND THEIR RELATIONSHIPS TO THE GENERATOR SUBMITTING THE REPORT FORM

Identity	Relationship	Identity	Relationship

SECTION II Information on LLRW Transferred for Disposal

A ENTER HERE THE UNIT OF ACTIVITY YOU WILL USE TO COMPLETE THIS REPORT FORM ACTIVITY IN
USE THIS SAME UNIT FOR ALL "ACTIVITY" ENTRIES YOU MAKE milllicuri

B WAS ANY LLRW TRANSFERRED FROM YOUR FACILITY FOR DISPOSAL DURING THE CALENDAR YEAR COVERED BY THIS REPORT? ☐ NO Skip to Section III
☒ YES Continue with this section

C COMPLETE ATTACHMENTS I AND II

D COMPLETE THE FIRST FOUR COLUMNS OF TABLE 2 FOR LLRW TRANSFERRED FOR DISPOSAL DURING THE REPORTING PERIOD

Volume (Ft ³)	Chem Form	Phys Form	Radionuclides	S/S Code	Hazardous Prop Code(s)
150	ME	S4	U238, Th232		

E DID YOU ENTER PHYSICAL FORM CODES S9 OR S10 ON TABLE 2?

☒ NO
☐ YES Complete the "S/S Code" (Sorption/Solidification Code) column of TABLE 2

F DOES ANY OF THE LLRW REPORTED IN TABLE 2 HAVE ANY KNOWN HAZARDOUS PROPERTIES OTHER THAN RADIOACTIVITY? ☒ NO
☐ YES Complete the "Hazardous Property Code(s)" column of TABLE 2

G DID YOU TRANSFER ANY LLRW FOR DISPOSAL WHICH CONTAINED MORE THAN 0.1% BY WEIGHT CHELATING AGENTS? ☒ NO
☐ YES Complete TABLE 3 for such waste. Refer to instructions for code listing.

Chelating Agent Code	Weight Percent	LLRW Volume (Ft ³)	LLRW Weight (Lb)

H COMPLETE TABLE 4 FOR CONTAINERS USED TO TRANSFER LLRW FOR DISPOSAL DURING THE REPORTING PERIOD. THERE SHOULD BE A SEPARATE ENTRY FOR EACH CONTAINER TYPE.

Container Type	Volume (Ft ³)	Weight (Lb)	Specifications or Dimensions	Number of Containers	High-Integrity Container YES OR NO	APPROVING AGENCY
Metal Drum	7.5	545-780	55-gallon	20		

I PLEASE ENTER THE HIGHEST SURFACE RADIATION LEVEL OF ANY SINGLE CONTAINER TRANSFERRED FOR DISPOSAL

1 mR/hour

UCCNHT0003194

J IS YOUR RESPONSE TO PART I 200 mR/hour OR GREATER? ☒ NO
☐ YES Complete the rest of this question

1 ENTER THE TOTAL NUMBER OF CONTAINERS TRANSFERRED FOR DISPOSAL WHICH HAD SURFACE RADIATION LEVELS OF 200 mR/hour OR GREATER _____ Containers

2 PLEASE COMPLETE TABLE 5 FOR SUCH CONTAINERS IF ADDITIONAL SPACE IS NEEDED USE ATTACHMENT III

TABLE 5	Volume (Ft ³)	Class	Activity by Radionuclide (Units)	Volume (Ft ³)	Class	Activity by Radionuclide (Units)

K DID YOU TRANSFER ANY SOURCE MATERIAL FOR DISPOSAL? ☒ NO
☐ YES Complete TABLE 6 for such material

TABLE 6	SM Type Code	Weight (Lb)	SM Type Code	Weight (Lb)

L DID YOU TRANSFER ANY SPECIAL NUCLEAR MATERIAL FOR DISPOSAL? ☒ NO
☐ YES Complete TABLE 7 for such material

TABLE 7	SNM Description	Total (Grams)	SNM Description	Total (Grams)

MAXIMUM, Single shipment	Total Grams	Contained U 233 Grams	Contained U 235 Grams	Contained Pu Grams
-----------------------------	----------------	--------------------------	--------------------------	-----------------------

M WAS ANY OF THE LLRW WHICH WAS TRANSFERRED FOR DISPOSAL TREATED IN PREPARATION FOR TRANSFER? ☒ NO
☐ YES Complete TABLE 8 for such treatment processes

a) TO REDUCE ITS VOLUME?
b) TO REDUCE ITS ACTIVITY?
c) TO CHANGE ITS PHYSICAL OR CHEMICAL CHARACTERISTICS?

TABLE 8	Treatment		Effectiveness
	Code	Description	

SECTION III Information on LLRW Held for Decay, and on Storage of LLRW

A DID YOU HOLD FOR DECAY AND DISPOSAL AS NON-RADIOACTIVE WASTE ANY LLRW GENERATED DURING THE REPORTING PERIOD?

☒ NO
☐ YES Identify the radionuclides originally contained in such waste

RADIONUCLIDES

B DO YOU HAVE ANY FACILITIES DEDICATED TO THE STORAGE OF LLRW FOR PERIODS IN EXCESS OF 90 DAYS PRIOR TO TRANSFER FOR DISPOSAL? ☒ NO
☐ YES Complete the rest of this question

1 BRIEFLY DESCRIBE SUCH FACILITIES INCLUDE THEIR APPROXIMATE TOTAL LLRW VOLUME CAPACITY IN CUBIC FEET

	CAPACITY	(Ft ³)
	IN STORAGE	(Ft ³)

C WERE YOU HOLDING ANY LLRW AT THE END OF THIS REPORTING PERIOD BECAUSE YOU KNEW OR HAD REASON TO BELIEVE THAT IT WOULD NOT BE ACCEPTED FOR DISPOSAL AT ANY OF THE LICENSED LLRW DISPOSAL FACILITIES?

☒ NO

☐ YES Complete the rest of this question

1 COMPLETE TABLE 9

Class	Volume (Ft ³)	Total Activity (Units)	Activity by Radionuclide (Units)	Description

2 PLEASE STATE THE REASON THIS LLRW IS KNOWN OR BELIEVED TO BE UNACCEPTABLE FOR DISPOSAL AT ANY OF THE LICENSED LLRW DISPOSAL FACILITIES

D PLEASE ESTIMATE HOW MANY MONTHS YOU COULD STORE YOUR LLRW AT YOUR FACILITIES WITHOUT DISRUPTION OF YOUR ACTIVITIES WHICH RESULT IN THE GENERATION OF LLRW .. SHOULD YOU BE UNABLE TO TRANSFER YOUR LLRW FOR DISPOSAL.

Months

SECTION IV Five-Year Estimates

A PLEASE COMPLETE TABLE 10 WITH YOUR BEST ESTIMATES OF THE LLRW YOU EXPECT TO TRANSFER TO LICENSED LLRW DISPOSAL FACILITIES IN EACH OF THE FIVE YEARS SUBSEQUENT TO THIS REPORTING PERIOD

		Volume (Ft ³)	Activity (Units)	Radionuclides
1987	Class A	NONE - COMPANY HAS BEEN SOLD		
	B			
	C			
	Total			
1988	Class A			
	B			
	C			
	Total			
1989	Class A			
	B			
	C			
	Total			
1990	Class A			
	B			
	C			
	Total			
1991	Class A			
	B			
	C			
	Total			

SIGNATURE OF PREPARER (See Section I, Part D)

DATE MONTH DAY YEAR

0 16 2 13 8 17

UCCNHT0003196

(See Section II, Part C)

FACILITY (From Section I, Part A)

CITY (From Section I, Part A)

UMETCO MINERALS CORPORATION

Niagara Falls

ACTIVITY (ACT) IS IN (Specify unit)

Millicur1

CLASS A

TOTAL VOLUME	TOTAL ACT	THESE FIGURES SHOULD AGREE					
150 Ft ³	2 14						

VIA	BROKER OR AGENT NAME Chem-Nuclear System, Inc.	TO	BARNWELL		RICHLAND		BEATTY		TOTAL VOLUME	TOTAL ACT
			VOLUME	ACT	VOLUME	ACT	VOLUME	ACT		
			150	2.14						
DIRECT TRANSFER										
TOTALS			150	2.14					150	2 14

ENTER THE VOLUME OF CLASS A WASTE THAT MET
10 CFR 61.56(b) STABILITY REQUIREMENTS

Ft³

IF "NONE," CHECK HERE ☐

CLASS B

TOTAL VOLUME	TOTAL ACT	THESE FIGURES SHOULD AGREE					
Ft ³							

VIA	BROKER OR AGENT NAME	TO	BARNWELL		RICHLAND		BEATTY		TOTAL VOLUME	TOTAL ACT
			VOLUME	ACT	VOLUME	ACT	VOLUME	ACT		
DIRECT TRANSFER										
TOTALS										

CLASS C

TOTAL VOLUME	TOTAL ACT	THESE FIGURES SHOULD AGREE					
Ft ³							

VIA	BROKER OR AGENT NAME	TO	BARNWELL		RICHLAND		BEATTY		TOTAL VOLUME	TOTAL ACT
			VOLUME	ACT	VOLUME	ACT	VOLUME	ACT		
DIRECT TRANSFER										
TOTALS										

TOTALS FOR ALL CLASSES

TOTAL VOLUME	TOTAL ACT
150 Ft ³	2 14

ENTER THE SUMS OF
CLASSES A, B AND C

List the radionuclides contained in LLRW transferred to licensed LLRW disposal facilities during the reporting period and the respective total activity

CITY (from Section I Part A)

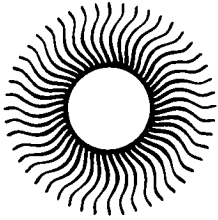
Niagara Falls

[illegible][illegible]

FACILITY (From Section I, Part A)

CITY (From Section I Part A)

[illegible]



**New York State
Energy Research and Development Authority**

Two Rockefeller Plaza • Albany, New York 12223
(518) 465-6251

WILLIAM D. COTTER
Chairman

IRVIN L. WHITE
President

June 17, 1987

D.J. Hansen
(or current Director)
UMETCO Minerals Corporation
Technology Dept.
Post Office Box 579
Niagara Falls, New York 14303

Dear Mr. Hansen:

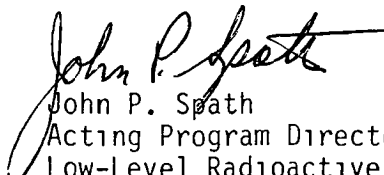
By letter dated March 27, 1987, you were advised of the new New York State requirement to report on low-level radioactive waste generated in the State in 1986 and were provided the necessary forms and instructions for complying with same. While our records show that you transferred LLRW to a licensed commercial disposal facility during 1986, we have no record of having received a report from you. The statutory deadline for submission of such reports was April 27, 1987. You should note that the applicable statute does contain provisions for civil and criminal penalties for failure to submit required reports.

Enclosed herewith is the Low-Level Radioactive Waste Report Form and associated Instructions. Also enclosed is a copy of the related Energy Authority regulations and the LLRW report and penalty provisions from the New York State Low-Level Radioactive Waste Management Act (Chapter 673 of the Laws of 1986).

To bring you into compliance with New York State law and the Energy Authority regulations, your immediate attention to this matter is required. If a Report has already been submitted, you should contact this office to verify its receipt. Otherwise, the required Report must be prepared and submitted without further delay. In any event, a LLRW Report must be received by the Energy Authority no later than July 1, 1987.

If you have any questions regarding this matter, please feel free to contact me.

Sincerely,


John P. Speth
Acting Program Director
Low-Level Radioactive
Waste Disposal

JPS/ic
Enclosures

UCCNHT0003200

GENERAL INSTRUCTIONS

- 1 Pursuant to Public Authorities Law Section 1854 d (1) as enacted by Ch. 673 L. 1986 (provided with these Instructions) any person who generates low level radioactive waste in New York State is required to submit annually a report on such waste to the Energy Authority
- 2 Regulations governing the reporting of low level radioactive waste have been promulgated as new Part 502 of Chapter XI of Title 21 NYCRR referred to herein as the Reporting Regulations. A copy of the Reporting Regulations is provided with these Instructions. You should note especially Sections 502.2 through 502.4 of the Reporting Regulations in preparing the Report Form. Terms defined in the Reporting Regulations (e.g. LLRW, licensed LLRW disposal facility) have the same meaning in the Report Form and these Instructions. In the case of any perceived inconsistencies in information required by the Report Form and by the Reporting Regulations, the Regulations take precedence.
- 3 Please read these Instructions and the Reporting Regulations before attempting to complete the Report Form.
- 4 All quantitative data entered on the Report Form must be the total for the entire calendar year being reported unless otherwise specified.
- 5 The Report Form is designed to allow you to skip over any questions which don't apply to you. Therefore you should follow its numerical order from beginning to end. Please complete all applicable items.
- 6 Please be sure to mark all ☐ NO ☐ YES choices clearly with an X (e.g. ☒ NO).
- 7 The Report Form for calendar year 1986 must be completed and submitted no later than April 27, 1987. Reports for each subsequent calendar year are to be submitted by March 1 of the year immediately following.
- 8 Please note that pursuant to Section 502.3(a) of the Reporting Regulations, any generator who generates LLRW at facilities in New York State located more than 25 miles apart is required to submit a separate Report Form for each such facility. If a generator generates LLRW at facilities in the State located 25 miles or less apart for which separate disposal site use permits or similar authorizations are held, the generator must submit a separate Report Form for each such facility.
- 9 If any response exceeds the space available for it in the Report Form or its Attachments, please type or print the response on a separate sheet and attach it to the Report Form. Write "See attachment" on the Report Form near the question and note the question number on the attachment. Explanatory notes on attachments are welcome.
- 10 The Report Form or any of its pages or Attachments may be reproduced.
- 11 Please retain these Instructions and a copy of your completed Report Form, attachments and worksheets in the office of the contact person identified in Section 1, Part B of the Report Form.
- 12 If you require assistance, you may call Jack Spath at (518) 465 6251.
- 13 Please return the completed Report Form and attachments to:
Program Director
Radioactive Waste Management Program
New York State Energy Research and Development Authority
Two Rockefeller Plaza
Albany, NY 12223

SPECIFIC INSTRUCTIONS

The Report Form is largely self-explanatory, but for some questions and terms, explanations may be helpful. Wherever possible, coded lists of candidate answers have been established to simplify responses. These Specific Instructions provide such explanations and coded candidate answers. Note that whenever the candidate answer "Other" is used, it must be accompanied by an explanation. Such explanation may be entered directly on the Report Form if there is sufficient space, or on a separate sheet attached to the Report Form.

These Specific Instructions are numbered to correspond to the Report Form questions. Please read the Specific Instruction for each question before responding.

Where no instruction is considered necessary, the statement "self-explanatory" is used.

SECTION I Generator information

- A Please review Section 502.3(a) of the Reporting Regulations for a description of facilities for which a Report Form must be submitted.
- B The "Contact Person" is the person you prefer we contact with any questions regarding your completed Report Form.
- C Self-explanatory.
- D Self-explanatory.
- E Generally, a single license from a single licensing agency will cover most institutions, corporations, utility companies, etc. If an institution or corporation holds multiple licenses under which LLRW was generated, or if persons within such organizations hold individual licenses under which LLRW was generated, then all such licenses and the respective licensing agencies must be identified. This should be done by appending a list of the license numbers and the licensing agencies to the Report Form.
- F Please review Section 502.3(c)(vii) of the Reporting Regulations for a description of authorization. An example is the State of Washington Department of Ecology site use permit for the Richland licensed LLRW disposal facility.

G. Use the following "Facility Type Code" table. Enter the table on the left side and choose the most applicable category, ELECTRIC UTILITY, MEDICAL, INDUSTRIAL, ACADEMIA (NON MEDICAL) or GOVERNMENTAL (NON MEDICAL). Then choose one letter from the left column and one number from within the selected category. Examples:
A nuclear power plant [A, 1] A city owned clinic [C, 2] A private medical research facility [D, 10]

Facility Type Codes

ELECTRIC UTILITY:

- A Nuclear Power Plants
B Other

Enter "1"

MEDICAL:

- C Governmental
D Private
E College or University
F Other

- 1 Hospital
2 Clinic
3 Office
4 Laboratory

- 5 Nuclear Pharmacy
6 Veterinary Clinic
7 Consultant
8 Mobile Unit

- 9 Medical School
10 Medical Research
11 Other

INDUSTRIAL:

- G Research and Development
H Manufacturing
I Sales
J Service
K Other

- 1 Radiopharmaceuticals
2 Devices and Gauges
3 Well Logging/Tracing
4 Irradiation
5 Waste Broker/Processor

- 6 Decontamination
7 Nuclear Laundry
8 Radiotracers
9 Non-destructive Testing

- 10 Analysis
11 Other

ACADEMIA (NON-MEDICAL):

- L College or University
M Other

- 1 Research, non medical
2 Reactor Operations
3 Education and Training
4 Other

GOVERNMENTAL (NON MEDICAL):

- N New York State
O County, Town, City, Village
P Public Authority
Q Federal

- 1 Research
2 Laboratory, non research
3 Other

If you used any of the codes for "Other," an explanation must be provided.

H Self explanatory

I Please review Section 502.3(b) of the Reporting Regulations

SECTION II Information on LLRW transferred for disposal

For the purposes of Sections II, III, and IV of these Specific Instructions and the Report Form

- "transfer" by itself or in phrases such as "transfer for disposal" means transfer either directly by the generator or by its broker or agent
- "disposal" by itself or in phrases such as "transfer for disposal" means disposal at a licensed LLRW disposal facility,
- "volume" means container or waste package volume as typically reported on disposal site manifests, and
- "radionuclides" mean each individual radionuclide if these are known, or at a minimum all radionuclides which have been or would have to be identified on disposal site manifests. H-3, C-14, Tc-99 and I-129 must be identified where present.

A. The activity unit you will use to complete the Report Form should be entered in the space provided. The activity unit should be the curie or some sub-unit of the curie such as the millicurie (0.001 curies) or the microcurie (0.00001 curies). The generator should use the unit which applies best to the LLRW it generated during the reporting period. The generator should be sure to use this same unit for all Activity entries on the Report Form.

B. Self explanatory

C. Attachment I. Only LLRW which was shipped for disposal at the three licensed LLRW disposal facilities is addressed. Attachment I summarizes on one page, by class, the volumes and total activities of LLRW transferred, who transferred it, and where it went for disposal. "Direct transfer" means transfer of LLRW by the generator, the generator's employees or by an independent contractor directly from the facility where generated to a licensed LLRW disposal facility. Transfer by broker or agent means that the LLRW was transferred from the facility where generated to one or more brokers or agent's collection or treatment facilities, and then from such facilities to a licensed LLRW disposal facility. If you use more than one broker or agent, attach a separate sheet providing the required information for each additional broker or agent. The use of a photocopy of Attachment I for this purpose is perfectly acceptable.

Attachment II. List on Attachment II the radionuclides contained in LLRW transferred to licensed LLRW disposal facilities during the reporting period. For each radionuclide, identify the total activity contained in such LLRW. Be sure to use the activity units you identified in Section II, Part A of the Report Form.

D. Enter on TABLE 2, by volume, the principal chemical and physical form of LLRW transferred for disposal during the reporting period. Use the following Chemical Form Codes and Physical Form Codes for this purpose. The use of the codes for "Other" must be accompanied by an explanation. For each separate entry, identify the radionuclides present in such LLRW.

Chemical Form Codes

PR Protein
AA Amino Acid
OS Organic Salt
IS Inorganic Salt
CH Carbohydrate

SG Sugar
EZ Enzyme
SR Scintillation Residue
ST Steroid
FA Fatty Acid

ME Elemental Metals or Metal
Oxides
OT Other

Physical Form Codes

SOLIDS

S1 Carcasses Biologicals
S2 Compacted Trash
S3 Uncompacted Trash
S4 Contaminated Bulk (soil,
wood rubble etc)

S5 Equipment/Hardware/
Components
S6 Incinerator Ash Residue
S7 Sealed Sources
S8 Solidified Resins Sludges

S9 Solidified Liquids
S10 Sorbed Liquids

LIQUIDS

L1 Contaminated Oils

L2 Scintillation Fluids

L3 Organic Liquids

OTHER

O1 Compressed Gas

O2 Dewatered Filter Media IX
Resins

O3 Other

If you used the codes for Other (i.e. OT or O3) an explanation must be provided

E If you entered Physical Form Codes S9 or S10 you have transferred sorbed or solidified liquid waste. The intent here is to learn the principal sorption or solidification media used.

To complete the S/S Code column of TABLE 2, enter one of the following Sorption/Solidification Codes on each line where S9 or S10 appears in the Phys Form Code column.

Sorption/Solidification Codes

SORPTION

A1 Vermiculites
A2 Speedi Dri
A3 Florco
A4 Other Clays
A5 Diatomaceous Earths
A6 Chemsil
A7 Other Perlites
A8 Other

SOLIDIFICATION

S1 Asphalt or Bitumen
S2 Delaware Custom Media
S3 Dow Media
S4 Cement or Grout
S5 Envirostone
S6 Aztech
S7 Aquaset or Petroset
S8 Other

If you used the codes for Other (i.e. A8 or S8) an explanation must be provided.

F To complete the Hazardous Property Code(s) column of TABLE 2, enter one or more of the following Hazardous Property Codes on the appropriate lines.

Hazardous Property Codes

1 Toxic
2 Explosive
3 Gas, Fume or
Vapor producing
4 Corrosive
5 Ignitable
6 Carcinogenic
7 Pathogenic
8 Other

If you used the code for Other (i.e. 8) an explanation must be provided.

G Enter a Chelating Agent Code in TABLE 3 one per line, from the Chelating Agent Codes below.

The Weight Percent entries should all be greater than 0.1%. Smaller weight percents should not be reported.

The LLRW Volume and LLRW Weight entries should provide the volume and weight of the LLRW which contains the chelating agent coded on the same line.

Weight means as shipped weight, as required by disposal site manifests.

Chelating Agent Codes

1 EDTA
2 DTPA
3 Other Amino Polycarboxylic
Acids
4 Hydroxy Carboxylic Acids
5 Citric Acid
6 Carbonic Acid
7 Glucinic Acid
8 Other Polycarboxylic Acids

H On TABLE 4 identify the types of containers used to transfer LLRW for disposal directly or through a broker or agent during the reporting period and for each different container type identify the volume, the weight or range of weights, in pounds, of the container when filled, the container specifications or dimensions and the number of such containers transferred for disposal. Indicate if the container has been approved as a high integrity container and identify the approving agency.

The container in this question is the container which, along with its contained LLRW, is disposed of. It does not include any reusable overpacking required for transport. Container type should be identified by a brief phrase such as metal drum, metal box, wooden box, polyethylene tanks, fiberglass liner, etc.

Under Specifications or Dimensions, if the container can be identified by a specific referenceable specification, that specification should be cited and the complete specification attached or properly referenced (e.g., U.S. Department of Transportation 17h 55 gallon steel drum). When a referenceable specification is not used, the dimensions of the container (e.g., length, width, height, diameter as applicable) should be provided.

A High Integrity Container means a disposal container approved by a regulatory entity that provides sufficient stability after disposal to meet U.S. Nuclear Regulatory Commission stability requirements as set forth in 10 CFR Section 61.56(b)(1), incorporated by reference in the Reporting Regulations.

I Self explanatory

J Self explanatory

1 Self explanatory

2 TABLE 5 calls for information on each of the containers in the total entered in 1. For example, if you entered 16 in 1, there should be 16 line entries in TABLE 5.

If necessary, continue TABLE 5 on ATTACHMENT III of the Report Form. Use more than one line per container if necessary to list radionuclides in the container. See definition of radionuclides in Section II of these instructions. Activity units should be noted and should be the same unit specified in Section II, Part A.

K - "Source material" means any of the materials listed below under SM Type Codes.

Enter one SM Type Code per line on TABLE 6. Use a separate line for each type of source material you transferred. Enter the weight in pounds of such material(s) in the second column. In this case, "weight" means your best estimate of the weight of the source material itself, exclusive of any other package weight such as filler or container weight.

SM Type Codes

NU Natural Uranium

UO Uranium Ores

TO Thorium Ores

DU Depleted Uranium

NT Natural Thorium

L - "Special nuclear material" means plutonium, U 233, uranium enriched in U 233 or U 235, and any material artificially enriched in any of the foregoing.

Under "SNM Description" on TABLE 7, please enter the isotopes in abbreviated form and the approximate percent by weight composition as appropriate. Example: "U 235 5%."

Under "Total," enter the total quantity in grams of each special nuclear material transferred during the calendar year being reported.

Under "MAXIMUM Single Shipment," enter the maximum quantity in grams of special nuclear material transferred in any single shipment during the calendar year being reported and the grams of U 233, U 235 and Pu contained in that shipment.

M Please review Section 502.3(c)(viii)(L) of the Reporting Regulations.

To complete TABLE 8, enter one of the Treatment Codes below for each waste treatment process used by the generator or others, including brokers, to treat your waste.

Under "Description," enter a brief descriptive term or phrase (e.g., mobile drum compactor, dual chamber incinerator, etc.) which will help to more completely explain the treatment applied.

Under "Effectiveness," enter your best estimate of the effectiveness of each treatment in terms of volume reduction, activity reduction, or in other appropriate terms. Where possible, express reductions as percents of the original untreated LLRW. Where LLRW was treated more than once, as by a drum compactor and later by a supercompactor, try to estimate the net effectiveness of both steps on the original LLRW.

Examples: "Volume reduction of 40%," or "Activity reduction of 20%," etc.

Treatment Codes

SOLIDS

S1 Compaction, including balers, baggers, high or low force mobile or fixed compactors

S2 Incineration, any kind, including pyrolysis

S4 Other

S3 Sectioning or cutting up large components

WET SOLIDS

W1 Solidification

W2 Incineration

W3 Filtration

W4 Other

LIQUIDS

L1 Evaporation

L2 Membrane technologies, including reverse osmosis, ultrafiltration, etc.

L3 Fluid bed drying/calcining

L4 Other

If you used the codes for "Other" (i.e., S4, W4 or L4), an explanation must be provided.

SECTION III Information on LLRW held for decay, and on storage of LLRW

A Self explanatory

B Please review Section 502.3(c)(x) of the Reporting Regulations. Do not include holding or staging areas or any other such facilities which are not dedicated to the storage of LLRW for periods in excess of 90 days.

1 Self explanatory

2 Self explanatory

C Self explanatory

1 Under "Description," you may either enter appropriate Chemical or Physical Form Codes (these are found under the instructions for Section II, Part D), or you may enter a brief verbal description. Use more than one line per class of waste if required to list all radionuclides therein. Activity units should be noted and should be the same units specified in Section II, Part A.

2 Self explanatory

D Please respond without regard to whether or not you have any dedicated storage capacity of the kind referred to in Section III, Part B. In responding, you should take into account the availability of safe and secure storage areas and any regulatory limits on the amount of radioactive material they may possess at any one time.

SECTION IV Five-year estimates

A Please enter the units you are using for activity. The units should be the same units identified in Section II, Part A.

UCCNHT0003204

New York State Energy Research and Development Authority

21 NYCRR

PART 502

REPORTS BY GENERATORS OF LOW LEVEL RADIOACTIVE WASTE

Section 502.1 Purpose. Ch. 673-L, 1986, the Low Level Radioactive Waste Management Act, provides that the New York State Energy Research and Development Authority has responsibility for the construction and operation by 1993 of facilities in New York for permanent disposal of low level radioactive waste generated within New York. The Act establishes the Commission for Siting Low Level Radioactive Waste Disposal Facilities and empowers the Commission to make site and disposal method selections sufficient to accommodate low level radioactive waste generated in New York over at least thirty years. The Act also provides related responsibilities for the New York State Department of Environmental Conservation ("DEC") and the New York State Department of Health ("DOH"). The Act provides that the Authority shall establish by regulation and collect rates, charges, and other fees upon the disposal of low level radioactive waste sufficient to recover from generators costs of the State associated with low level radioactive waste management facilities, and authorizes the Authority to establish terms and conditions for receipt, acceptance, and disposal of low level radioactive waste at the permanent disposal facilities. The Act requires the Authority to submit annually to the Governor and the Legislature a report summarizing low level radioactive waste generated within New York during the previous calendar year. In addition, the Act requires each generator of low level radioactive waste within New York to submit to the Authority no less frequently than annually a report detailing low level radioactive waste generated, stored for decay or later transfer, or transferred by the generator. The purpose of these rules is to set forth the requirements for reports to be submitted by generators to the Authority. The purpose of the reporting requirements is to assist the Authority in constructing low level radioactive waste management facilities, establishing rates, charges, and other fees for disposal of low level radioactive waste, and terms and conditions for its receipt, acceptance, and disposal at permanent disposal facilities, and preparing the reports to be submitted annually by the Authority to the Governor and the Legislature. In addition, the reports are intended to provide information useful to the DEC, the Commission for Siting Low Level Radioactive Waste Disposal Facilities, and the Advisory Committee on Permanent Disposal Facilities Siting and Disposal Method Selection in meeting their responsibilities under the Act.

Section 502.2 Definitions. For purposes of this Part:

(a) "Act" means the Low Level Radioactive Waste Management Act (Ch. 673-L, 1986).

(b) "Authority" means the New York State Energy Research and Development Authority and any successor thereto.

(c) "Class" means the classes of low level radioactive waste: Class A, Class B, and Class C, as described in sections 61.55 and 61.56 of title 10, Code of Federal Regulations, as in effect on January 26, 1983.

(d) "Director" means the Program Director, Radioactive Waste Management Program, or his designee, New York State Energy Research and Development Authority, Two Rockefeller Plaza, Albany, N.Y. 12223.

(e) "Generate" means to produce or cause the production of, or to engage in an activity which otherwise results in the creation or increase in the volume, of low level radioactive waste.

(f) "Generator" means a person who by his actions within New York or through the actions within New York of any agent, employee, or independent contractor generates low level radioactive waste. For purposes of this Part, a person who only provides a service by arranging for the collection, transportation, treatment, storage, or disposal of low level radioactive waste generated by others within or outside of New York is a generator only if and to the extent that such person himself generates low level radioactive waste as a result of such activities. In such event, such person shall submit a report pursuant to section 502.3 only for the low level radioactive waste such person himself generates.

(g) "Licensed LLRW disposal facility" means any of the three disposal facilities existing upon the effective date of these regulations at Barnwell, South Carolina; Richland, State of Washington; and Beatty, Nevada.

(h) "Low level radioactive waste" and "LLRW" means radioactive waste:

(i) (A) that is not high level radioactive waste, transuranic waste, spent nuclear fuel, or the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; and

(B) which consists of or contains Class A, B, or C radioactive waste as described in sections 61.55 and 61.56 of title 10, Code of Federal Regulations, as in effect on January 26, 1983.

(ii) provided that, for purposes of this Part, low level radioactive waste does not include radioactive waste:

(A) owned or generated by the United States Department of Energy;

(B) owned or generated by the United States Navy as a result of the decommissioning of vessels of the United States Navy; or

(C) owned or generated by the Federal Government as a result of any research, development, testing, or production of any atomic weapons.

(i) "Person" means an individual, partnership, corporation, or other legal entity, including any state, interstate, federal, or municipal governmental entity.

(j) "Waste" means material which is not in use and is no longer useful.

Section 502.3 Reports. (a) No later than April 27, 1987, and no later than March 1 of each year thereafter, each generator shall submit to the Director a report (one copy) containing the information set forth in paragraph (c) of this section for the preceding calendar year, provided that if a generator generated low level radioactive waste at facilities located more than twenty-five miles apart, or at facilities located twenty-five miles or less apart for which separate authorizations are held, issued by the operator of a licensed LLRW disposal facility (e.g., site use permit) or the host state in which a licensed LLRW disposal facility is located, which authorize transfer of LLRW to a licensed LLRW disposal facility, the generator shall submit a separate report (one copy) for each such facility.

(b) In the event two or more persons are generators with respect to the same low level radioactive waste (for instance, because of their relationship as employer and employee or principal and agent), those persons shall designate between or among themselves one person who shall submit the report required by this section. The designee shall indicate on the report required by this section the identities of each of the other generators who are not submitting the report, and the nature of the relationships between or among the designee and such other generators. Notwithstanding the foregoing provisions of this paragraph, (b) an employer may submit the report on behalf of its employees, and a medical institution or university may submit the report on behalf of its physicians, interns, staff, or students who generate LLRW as independent contractors to such medical institution or university, without identifying the employees, physicians, interns, staff, or students on behalf of whom the report is submitted.

(c) Each report shall contain the following information:

(i) calendar year reporting period;

(ii) name, principal office address (and, if different, address of the facility at which LLRW was generated), and telephone number of the generator;

(iii) type of generator (e.g., medical, university, industrial, electric utility, or governmental) and a description of the activity, process, or use of radioactive material which results in the generation of LLRW;

(iv) the information with respect to other generators, if applicable, described in paragraph (b) of this section;

(v) name, title, and telephone number of the individual who prepared the report;

(vi) identification of any and all radioactive material and nuclear facility licenses issued by the United States Nuclear Regulatory Commission, the New York State Department of Health, the New York State Department of Labor, or the New York City Department of Health under which LLRW is generated, including identification of the respective licensing agency;

(vii) identification of any and all authorizations held by the generator, issued by the operator of a licensed LLRW disposal facility (e.g., site use permit) or the host state in which a licensed LLRW disposal facility is located, which authorize transfer of LLRW to a licensed LLRW disposal facility;

(viii) details regarding LLRW transferred, either directly or through a broker or agent, for disposal at a licensed LLRW disposal facility during the reporting period, including:

(A) the total volume, volume by class, and activity by radionuclide and class;

(B) the types and specifications of individual containers used and the number of each type transferred for disposal;

(C) the maximum surface radiation exposure level on any single container of LLRW transferred, the number of disposal containers with surface radiation exposure levels that exceed 200 mR/hour, and the identification of the contents of each such container by volume, class, and activity by radionuclide;

(D) the volume of Class A LLRW that meets the United States Nuclear Regulatory Commission stability requirements, as set forth in

section 61.56(b) of title 10, Code of Federal Regulations

(E) the identification of each licensed LLRW disposal facility to which LLRW was transferred, either directly or through a broker or agent, and the volume and activity by class of LLRW transferred to each licensed LLRW disposal facility

(F) the identification of all brokers or agents to which LLRW was transferred, the volume and activity by class of LLRW transferred to each, and the volume and activity by class of the generator's LLRW transferred by each such broker or agent to each licensed LLRW disposal facility

(G) the weight of source material by type (e.g., natural uranium, depleted uranium, or thorium).

(H) the total number of grams of special nuclear material by radionuclide, and the maximum number of grams of special nuclear material in any single shipment by radionuclide

(I) as complete a description as practicable of the principal chemical and physical form of the LLRW by volume and radionuclide, including the identification of any known hazardous properties, other than its radioactive properties

(J) for solidified or sorbed liquids, the nature of the liquid, the solidifying or sorbing agent used, and the final volume

(K) for LLRW containing more than 0.1 percent by weight chelating agents, the identification of the chelating agent, the volume and weight of the LLRW, and the weight percentage of chelating agent, and

(L) where LLRW identified in this subparagraph (viii) was treated either by the generator or its agent or independent contractor in preparation for transfer to a licensed LLRW disposal facility, to reduce its volume or activity (including reduction by storage for decay) or to change its physical or chemical characteristics (other than by solidification or sorption of liquids as addressed in clause (J)), a description of the treatment process and the generator's best estimate of the effectiveness in terms of the quantitative volume or activity reduction, or in quantitative or other relevant terms for changes in physical or chemical characteristics, as applicable

(ix) the radionuclides originally contained in any LLRW generated during the reporting period which was held for decay and disposed of as non-radioactive waste

(x) a description, including the capacity in terms of volume of LLRW, of any facilities or parts thereof which the generator has dedicated to the storage of LLRW for periods in excess of 90 days prior to transfer, either directly or through a broker or agent, to a licensed LLRW disposal facility, and the volume of LLRW stored by the generator in such facilities at the end of the reporting period

(xi) the volume, volume by class, and activity by radionuclide and class of that LLRW, if any, which the generator is holding at the end of the reporting period because the generator knows or has reason to believe that LLRW will not be accepted for disposal at any of the licensed LLRW disposal facilities, and a description of the LLRW and the reason it is known or believed to be unacceptable for disposal at any of the licensed LLRW disposal facilities, and

(xii) an estimate of the period of time the generator could store its LLRW at its facilities without disruption of its LLRW generating activities, should the generator be unable to transfer LLRW, either directly or through a broker or agent, to a licensed LLRW disposal facility

(d) In addition to the information required by paragraph (c) of this section, each report shall contain the generator's best estimate in terms of total volume and volume and activity by class and radionuclide of LLRW that the generator expects to transfer to licensed LLRW disposal facilities in each of the next five calendar years

Section 202.4 Registry and Forms. Commencing September 1, 1987, the Director shall maintain and update annually a registry of generators which have submitted reports for the preceding calendar year. Commencing November 1, 1987, and by November 1 of each year thereafter, the Director shall forward a blank reporting form to each generator listed on the most recent registry, at the address indicated on the registry. The foregoing notwithstanding, each generator, including new generators, shall be responsible for obtaining blank reporting forms from the Director.

Section 202.5 Trade Secrets. In the event a generator submitting a report required by section 202.3 makes a request pursuant to section 89(3) of the Public Officers Law that information in the report be exempted from disclosure, the generator shall clearly identify that specific information in the report for which the request is made by labeling that specific information as "trade secret" or "proprietary data." Pending a final determination of the request pursuant to section 89(3) of the Public Officers Law, the Director shall maintain the report or relevant portion

thereof in a separate and secure file, and shall deny access to the report or relevant portion thereof to all persons other than employees of the Authority who require access in order to use the report or relevant portion thereof to carry out responsibilities under the Act. Nothing contained in this section shall prohibit the Authority from using or disclosing information which is the subject of the request without detail which identifies the generator, for the purpose of carrying out its responsibilities under the Act, or enabling other State governmental entities to carry out their responsibilities under the Act.

Section 202.6 Materials Incorporated by Reference. (a) The term "low-level radioactive waste" is defined in section 202.2 hereof, in part, by federal descriptions of Class A, B, or C radioactive waste as set forth in sections 61.55 and 61.56 of Title 10, Code of Federal Regulations, as in effect on January 26, 1983 ("federal provisions"). In summary, the federal provisions are as follows: Of the three classes, Class A is the least and Class C the greatest potential hazard to the public and the environment. Classification is determined by concentration of long- and short-lived radionuclides. All three classes must meet minimum waste form and packaging characteristics to facilitate handling and worker protection. Class B and C radioactive wastes must also meet stability requirements intended to minimize water infiltration and leachability of radionuclides from the waste. Disposal of Class C radioactive waste requires measures to protect against inadvertent intrusion.

(b) The federal provisions are set forth in Subpart D, entitled "Technical Requirements for Land Disposal Facilities," of Part 61, entitled "Licensing Requirements for Land Disposal of Radioactive Waste," of the rules of the United States Nuclear Regulatory Commission, published in the first volume of Title 10, entitled "Energy," of the Code of Federal Regulations, containing Parts 60 to 199, revised, of January 1, 1986, on pages 645-647 of such volume. The publisher of the volume is the Office of the Federal Register, National Archives and Records Administration. A copy of the volume may be obtained by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. A copy of the volume is available for public inspection and copying at the offices of the Authority, located at Two Rockefeller Plaza, Albany, New York 12223.

Materials Incorporated by Reference — Excerpts from Title 10 Code of Federal Regulations, Part 61

Section 61.55 Waste Classification

(a) Classification of waste for near surface disposal

(1) Considerations. Determination of the classification of radioactive waste involves two considerations. First, consideration must be given to the concentration of long lived radionuclides (and their shorter lived precursors) whose potential hazard will persist long after such precautions as institutional controls, improved waste form, and deeper disposal have ceased to be effective. These precautions delay the time when long lived radionuclides could cause exposures. In addition, the magnitude of the potential dose is limited by the concentration and availability of the radionuclide at the time of exposure. Second, consideration must be given to the concentration of shorter lived radionuclides for which requirements on institutional controls, waste form, and disposal methods are effective.

(2) Classes of waste

(i) Class A waste is waste that is usually segregated from other waste classes at the disposal site. The physical form and characteristics of Class A waste must meet the minimum requirements set forth in section 61.56(a). If Class A waste also meets the stability requirements set forth in section 61.56(b), it is not necessary to segregate the waste for disposal.

(ii) Class B waste is waste that must meet more rigorous requirements on waste form to ensure stability after disposal. The physical form and characteristics of Class B waste must meet both the minimum and stability requirements set forth in section 61.56.

(iii) Class C waste is waste that not only must meet more rigorous requirements on waste form to ensure stability, but also requires additional measures at the disposal facility to protect against inadvertent intrusion. The physical form and characteristics of Class C waste must meet both the minimum and stability requirements set forth in section 61.56.

(iv) Waste that is not generally acceptable for near surface disposal is waste for which waste form and disposal methods must be different, and in general more stringent than those specified for Class C waste. In the absence of specific requirements in this part, proposals for disposal of this waste may be submitted to the Commission for approval pursuant to section 61.58 of this part.

(3) Classification determined by long lived radionuclides. If radioactive waste contains only radionuclides listed in Table 1, classification shall be determined as follows:

(i) If the concentration does not exceed 0.1 times the value in Table 1, the waste is Class A.

(ii) If the concentration exceeds 0.1 times the value in Table 1 but does not exceed the value in Table 1, the waste is Class C.

(iii) If the concentration exceeds the value in Table 1, the waste is not generally acceptable for near surface disposal.

(iv) For wastes containing mixtures of radionuclides listed in Table 1, the total concentration shall be determined by the sum of fractions rule described in paragraph (a)(7) of this section.

TABLE 1

Radionuclide	Concentration curies per cubic meter
C-14	8
C-14 in activated metal	80
Ni-59 in activated metal	220
Nb-94 in activated metal	0.2
Ti-99	3
I-129	0.05
Alpha emitting transuranic nuclides with half life greater than five years	¹ 100
Pu-241	¹ 3,000
Cm-242	¹ 20,000

¹ Units are nanocuries per gram.

(4) Classification determined by short lived radionuclides. If radioactive waste does not contain any of the radionuclides listed in Table 1, classification shall be determined based on the concentrations shown in Table 2. However, as specified in paragraph (a)(6) of this section, if radioactive waste does not contain any nuclides listed in either Table 1 or 2, it is Class A.

(i) If the concentration does not exceed the value in Column 1, the waste is Class A.

(ii) If the concentration exceeds the value in Column 1 but does not exceed the value in Column 2, the waste is Class B.

(iii) If the concentration exceeds the value in Column 2, but does not exceed the value in Column 3, the waste is Class C.

(iv) If the concentration exceeds the value in Column 3, the waste is not generally acceptable for near surface disposal.

(v) For wastes containing mixtures of the nuclides listed in Table 2, the total concentration shall be determined by the sum of fractions rule described in paragraph (a)(7) of this section.

TABLE 2

Radionuclide	Concentration curies per cubic meter		
	Col 1	Col 2	Col 3
Total of all nuclides with less than 5 year half life	700	(¹)	(¹)
H-3	40	(¹)	(¹)
Co-60	700	(¹)	(¹)
Ni-63	30	70	700
Ni-63 in activated metal	30	700	7000
Sr-90	0.04	150	7000
Cs-137	1	44	4600

¹ There are no limits established for these radionuclides in Class B or C wastes. Practical considerations such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. These wastes shall be Class B unless the concentrations of other nuclides in Table 2 determine the waste to be Class C independent of these nuclides.

(5) Classification determined by both long and short lived radionuclides. If radioactive waste contains a mixture of radionuclides, some of which are listed in Table 1 and some of which are listed in Table 2, classification shall be determined as follows:

(i) If the concentration of a nuclide listed in Table 1 does not exceed 0.1 times the value listed in Table 1, the class shall be that determined by the concentration of nuclides listed in Table 2.

(ii) If the concentration of a nuclide listed in Table 1 exceeds 0.1 times the value listed in Table 1 but does not exceed the value in Table 1, the waste shall be Class C, provided the concentration of nuclides listed in Table 2 does not exceed the value shown in Column 3 of Table 2.

(6) Classification of wastes with radionuclides other than those listed in Tables 1 and 2. If radioactive waste does not contain any nuclides listed in either Table 1 or 2, it is Class A.

(7) The sum of the fractions rule for mixtures of radionuclides. For determining classification for waste that contains a mixture of radionuclides, it is necessary to determine the sum of fractions by dividing each nuclide's concentration by the appropriate limit and adding the resulting values. The appropriate limits must all be taken from the same column of the same table. The sum of the fractions for the column must be less than 1.0 if the waste class is to be determined by that column. Example: A waste contains Sr-90 in a concentration of 50 Ci/m³ and Cs-137 in a concentration of 22 Ci/m³. Since the concentrations both exceed the values in Column 1, Table 2, they must be compared to Column 2 values. For Sr-90, fraction = 50/150 = 0.33; for Cs-137, fraction = 22/44 = 0.5; the sum of the fractions = 0.83. Since the sum is less than 1.0, the waste is Class B.

(8) Determination of concentrations in wastes. The concentration of a radionuclide may be determined by indirect methods such as use of scaling factors which relate the inferred concentration of one radionuclide to another that is measured, or radionuclide material accountability, if there is reasonable assurance that the indirect methods can be correlated with actual measurements. The concentration of a radionuclide may be averaged over the volume of the waste or weight of the waste if the units are expressed as nanocuries per gram.

Section 61.56 Waste characteristics

(a) The following requirements are minimum requirements for all classes of waste and are intended to facilitate handling at the disposal site and provide protection of health and safety of personnel at the disposal site.

(1) Waste must not be packaged for disposal in cardboard or fiberboard boxes.

(2) Liquid waste must be solidified or packaged in sufficient absorbent material to absorb twice the volume of the liquid.

(3) Solid waste containing liquid shall contain as little free standing and noncorrosive liquid as is reasonably achievable, but in no case shall the liquid exceed 1% of the volume.

Materials Incorporated By Reference (continued)

(4) Waste must not be readily capable of detonation or of explosive decomposition or reaction at normal pressures and temperatures, or of explosive reaction with water

(5) Waste must not contain, or be capable of generating, quantities of toxic gases, vapors, or fumes harmful to persons transporting, handling, or disposing of the waste. This does not apply to radioactive gaseous waste packaged in accordance with paragraph (a)(7) of this section

(6) Waste must not be pyrophoric. Pyrophoric materials contained in waste shall be treated, prepared, and packaged to be nonflammable

(7) Waste in a gaseous form must be packaged at a pressure that does not exceed 15 atmospheres at 20°C. Total activity must not exceed 100 curies per container

(8) Waste containing hazardous, biological, pathogenic, or infectious material must be treated to reduce to the maximum extent practicable the potential hazard from the non radiological materials

(b) The requirements in this section are intended to provide stability of the waste. Stability is intended to ensure that the waste does not structurally degrade and affect overall stability of the site through slumping, collapse, or

other failure of the disposal unit and thereby lead to water infiltration. Stability is also a factor in limiting exposure to an inadvertent intruder, since it provides a recognizable and nondispersible waste

(1) Waste must have structural stability. A structurally stable waste form will generally maintain its physical dimensions and its form under the expected disposal conditions such as weight of overburden and compaction equipment, the presence of moisture, and microbial activity, and internal factors such as radiation effects and chemical changes. Structural stability can be provided by the waste form itself, processing the waste to a stable form, or placing the waste in a disposal container or structure that provides stability after disposal

(2) Notwithstanding the provisions in Section 61.56(a)(2) and (3), liquid wastes or wastes containing liquid must be converted into a form that contains as little free standing and noncorrosive liquid as is reasonably achievable, but in no case shall the liquid exceed 1% of the volume of the waste when the waste is in a disposal container designed to ensure stability, or 0.5% of the volume of the waste for waste processed to a stable form

(3) Void spaces within the waste and between the waste and its package must be reduced to the extent practicable

(Source of Regulatory Authority: Public Authorities Law, Section 1854-d (1))

Section 1854-d Generator reporting and fees

(1) Reports (a) Any person who generates low level radioactive waste in New York shall submit to the authority, on dates specified by the authority, but in no event later than nine months after the effective date of the low level radioactive waste management act and, thereafter, no less frequently than annually, reports detailing the classes and quantities of low level radioactive waste generated, stored by the generator for decay or for later transfer to other facilities, or transferred by the generator to other facilities, the general type of generator (e.g. medical, university, industry, electric utility, government) and such additional information as the authority may reasonably require on the nature and characteristics (including, without limitation, chemical and physical characteristics, properties, or constituents, radionuclides present, curie content or concentration of radioactivity) of such waste and the extent of reduction in quantity and the nature and extent of reduction or other change in the nature or characteristics of such waste as a result of treatment or interim

storage after generation and before delivery to facilities for permanent disposal of such waste. The authority shall provide by regulation appropriate procedures for the preparation and submission of such reports, including procedures to designate a person or persons responsible for such filing when more than one person is the generator of the same waste. Such reports shall be subject to the provisions of article six of the public officers law

(b) Commencing no later than the first day of July, nineteen hundred eighty seven, the authority shall submit annually to the governor, the temporary president of the senate, the speaker of the assembly, the minority leader of the senate, and the minority leader of the assembly, and thereafter, not later than one hundred eighty days after the end of each calendar year, a report summarizing and categorizing, by type of generator and region of generation, the nature, characteristics, and quantities of low level radioactive waste generated in New York during such calendar year

John P. Spath

N.Y. State

Energy Research & Development Authority

2 Rockefeller Plaza

Albany N.Y. 12223

Dear Mr. Spath:

Enclosed ~~is~~ ^{complete} the Low-level Radioactive

Waste Report Form that you sent me on June 13, 1987

¶ The Uranium Faculties at Niagara Falls,

~~was~~ were sold in 1986; ~~and~~ ~~and~~ it is

~~entirely possible~~ that the possibly because of this

I did not receive ~~the~~ your first letter

of March 27. The low-level waste

that we disposed of in 1986 was ~~again~~

contaminated soil and slag resulting from

operations that were discontinued several years ago.

The clean up was complete ~~with~~ the after
consultation with Robert Kelley of the New York
State Dept. of Labor prior to Termination
of ~~of~~ our Radioactive Material License
No. 950-0139. There will
be no more shipments of waste from
Umette.

V. truly yours

Donck J. Horne

Blond Copy
T J Kagetsu
J Frost

PUBLIC AUTHORITIES LAW, SECTION 1854-d(3)

3. Violations. a. Any failure or refusal to file a report, return, or other documentation, or related information, required pursuant to the provisions of this section shall be deemed a violation of the provisions of, and a failure to perform a duty imposed by, this section and shall be subject to the following civil and criminal penalties:

(1) By a civil penalty, in the case of a first violation, not to exceed five thousand dollars, and in the case of a second or subsequent violation, a civil penalty not to exceed ten thousand dollars; which penalty may be assessed and collected by a court in any action or proceeding pursuant to subparagraph (11) of this paragraph in addition to any criminal penalty which may be assessed for such violation.

(11) By a misdemeanor, in the case of a willful violation by a person having any of the culpable mental states defined in section 15.05 of the penal law, which shall be deemed a misdemeanor, and upon a first conviction thereof, by a fine not to exceed five thousand dollars, or by imprisonment for a term of not more than six months, or both such fine and imprisonment; and, upon a second or subsequent conviction thereof, punishment by a fine not to exceed ten thousand dollars, or by imprisonment for a term of not more than one year, or by both such fine and imprisonment.

b. The attorney general shall institute such civil proceedings as the authority may request for the purpose of enforcing the provisions of this section, and such criminal proceedings as the authority may request for the purpose of prosecuting criminal violations of this section.

NOTE Please refer to the INSTRUCTIONS before attempting to complete this form. Also see Public Authorities Law, Section 1854 d(1) and Part 502 of Chapter XI of Title 21 NYCRR (Reporting Regulations) provided with this form.
FOR THE PERIOD JANUARY 1 THROUGH DECEMBER 31, 1986

SECTION I - Generator Information

A FACILITY WHERE LLRW WAS GENERATED CODE (official use only)

STREET ADDRESS

CITY

COUNTY

STATE

ZIP CODE

NY

B NAME OF CONTACT PERSON AT THE FACILITY

TITLE

TELEPHONE

D. J. H.

RETIRED

(754) 7506

C NAME AND PRINCIPAL OFFICE OF GENERATOR IF DIFFERENT FROM PART A IF SAME ENTER SAME

STREET ADDRESS

CITY

COUNTY

STATE

ZIP CODE

D DID CONTACT PERSON IDENTIFIED IN PART B PREPARE THIS REPORT? ☒ YES

☐ NO Identify preparer below

PREPARER'S NAME

TITLE

TELEPHONE

()

E IDENTIFY ALL RADIOACTIVE MATERIAL AND NUCLEAR FACILITY LICENSES BY LICENSE NUMBER UNDER WHICH LLRW WAS GENERATED

LICENSING AGENCY

LICENSE NUMBER

New York State Department of Health

New York State Department of Labor

950 - 0139

New York City Department of Health

U S Nuclear Regulatory Commission

F IDENTIFY BY NUMBER AND ISSUING AUTHORITY PERMITS YOU HOLD WHICH AUTHORIZE TRANSFER OF LLRW TO A LICENSED LLRW DISPOSAL FACILITY

ISSUING AUTHORITY

AUTHORIZATION NUMBER

South Carolina Dept of Health

& ENVIRONMENTAL Control

0226 - 31-86-X

G REFER TO THE INSTRUCTION BOOKLET TO DETERMINE THE FACILITY TYPE CODE WHICH BEST DESCRIBES YOUR FACILITY AND ENTER HERE

FACILITY TYPE CODE

H 11

H BRIEFLY DESCRIBE THE ACTIVITIES, PROCESSES OR USES OF RADIOACTIVE MATERIAL WHICH RESULT IN THE GENERATION OF LLRW AT YOUR FACILITY

Production of ferro columbium, ^{and} ferro tantalum ^{iron} resulted in concentration of natural uranium and thorium in slag. The process was discontinued years ago - the current material was ^{from contaminated soil} residue around furnace and some ore and slag samples.

J IS YOUR RESPONSE TO PART I 200 mR/hour OR GREATER? ☒ NO
☐ YES Complete the rest of this question

1 ENTER THE TOTAL NUMBER OF CONTAINERS TRANSFERRED FOR DISPOSAL WHICH HAD SURFACE RADIATION LEVELS OF 200 mR/hour OR GREATER 5 Containers

2 PLEASE COMPLETE TABLE 5 FOR SUCH CONTAINERS IF ADDITIONAL SPACE IS NEEDED USE ATTACHMENT III

TABLE 5	Volume (Ft ³)	Class	Activity by Radionuclide (Units)	Volume (Ft ³)	Class	Activity by Radionuclide (Units)

K DID YOU TRANSFER ANY SOURCE MATERIAL FOR DISPOSAL? ☒ NO
☐ YES Complete TABLE 6 for such material

TABLE 6	SM Type Code	Weight (Lb)	SM Type Code	Weight (Lb)
	P.U.	1		
	A.T.	1		

L DID YOU TRANSFER ANY SPECIAL NUCLEAR MATERIAL FOR DISPOSAL? ☒ NO
☐ YES Complete TABLE 7 for such material

TABLE 7	SNM Description	Total (Grams)	SNM Description	Total (Grams)

MAXIMUM, Single shipment	Total Grams	Contained U 233 Grams	Contained U 235 Grams	Contained Pu Grams
--------------------------	-------------	-----------------------	-----------------------	--------------------

M WAS ANY OF THE LLRW WHICH WAS TRANSFERRED FOR DISPOSAL TREATED IN PREPARATION FOR TRANSFER? ☒ NO
☐ YES Complete TABLE 8 for such treatment processes

- a) TO REDUCE ITS VOLUME?
b) TO REDUCE ITS ACTIVITY?
c) TO CHANGE ITS PHYSICAL OR CHEMICAL CHARACTERISTICS?

TABLE 8	Treatment Code	Description	Effectiveness

SECTION III Information on LLRW Held for Decay, and on Storage of LLRW

A DID YOU HOLD FOR DECAY AND DISPOSAL AS NON RADIOACTIVE WASTE ANY LLRW GENERATED DURING THE REPORTING PERIOD?

- ☒ NO
☐ YES Identify the radionuclides originally contained in such waste

RADIONUCLIDES

B DO YOU HAVE ANY FACILITIES DEDICATED TO THE STORAGE OF LLRW FOR PERIODS IN EXCESS OF 90 DAYS PRIOR TO TRANSFER FOR DISPOSAL? ☒ NO
☐ YES Complete the rest of this question

1 BRIEFLY DESCRIBE SUCH FACILITIES INCLUDE THEIR APPROXIMATE TOTAL LLRW VOLUME CAPACITY IN CUBIC FEET

	CAPACITY (Ft ³)
2 INDICATE THE APPROXIMATE TOTAL VOLUME OF LLRW STORED IN SUCH FACILITIES IF ANY AT THE END OF THE REPORTING PERIOD	IN STORAGE (Ft ³)

WERE TWO OR MORE PERSONS GENERATORS OF THE SAME LLRW (e.g., an employer and an employee)? ☒ NO Skip to Section II
☐ YES Complete the rest of this question

1 IDENTIFY THE ONE PERSON DESIGNATED TO SUBMIT THIS REPORT

☐ Same as Section I, Part B ☐ Same as Section I, Part C ☐ Same as Section I, Part D
☐ Other (specify) NAME TELEPHONE

2 ON TABLE 1 IDENTIFY THE GENERATORS WHO ARE NOT SUBMITTING THE REPORT FORM AND THEIR RELATIONSHIPS TO THE GENERATOR SUBMITTING THE REPORT FORM

Identity	Relationship	Identity	Relationship

SECTION II Information on LLRW Transferred for Disposal

A ENTER HERE THE UNIT OF ACTIVITY YOU WILL USE TO COMPLETE THIS REPORT FORM. ACTIVITY IN USE THIS SAME UNIT FOR ALL ACTIVITY ENTRIES YOU MAKE. millicuri

B WAS ANY LLRW TRANSFERRED FROM YOUR FACILITY FOR DISPOSAL DURING THE CALENDAR YEAR COVERED BY THIS REPORT? ☐ NO Skip to Section III
☒ YES Continue with this section

C COMPLETE ATTACHMENTS I AND II

D COMPLETE THE FIRST FOUR COLUMNS OF TABLE 2 FOR LLRW TRANSFERRED FOR DISPOSAL DURING THE REPORTING PERIOD

Volume (Ft ³)	Chem Form	Phys Form	Radionuclides	S/S Code	Hazardous Prop Code(s)
150	ME	S4	U238, Th232		1

E DID YOU ENTER PHYSICAL FORM CODES S9 OR S10 ON TABLE 2?
☒ NO
☐ YES Complete the "S/S Code" (Sorption/Solidification Code) column of TABLE 2

F DOES ANY OF THE LLRW REPORTED IN TABLE 2 HAVE ANY KNOWN HAZARDOUS PROPERTIES OTHER THAN RADIOACTIVITY? ☒ NO
☐ YES Complete the "Hazardous Property Code(s)" column of TABLE 2

G DID YOU TRANSFER ANY LLRW FOR DISPOSAL WHICH CONTAINED MORE THAN 0.1% BY WEIGHT CHELATING AGENTS?
☒ NO
☐ YES Complete TABLE 3 for such waste. Refer to instructions for code listing

Chelating Agent Code	Weight Percent	LLRW Volume (Ft ³)	LLRW Weight (Lb)

H COMPLETE TABLE 4 FOR CONTAINERS USED TO TRANSFER LLRW FOR DISPOSAL DURING THE REPORTING PERIOD. THERE SHOULD BE A SEPARATE ENTRY FOR EACH CONTAINER TYPE

Container Type	Volume (Ft ³)	Weight (Lb)	Specifications or Dimensions	Number of Containers	High-Integrity Container YES OR NO	APPROVING AGENCY
METAL DRUM	7.5	545-780	55 gallon	20		

I PLEASE ENTER THE HIGHEST SURFACE RADIATION LEVEL OF ANY SINGLE CONTAINER TRANSFERRED FOR DISPOSAL 1 mR/hour

C WERE YOU HOLDING ANY LLRW AT THE END OF THIS REPORTING PERIOD BECAUSE YOU KNEW OR HAD REASON TO BELIEVE THAT IT WOULD NOT BE ACCEPTED FOR DISPOSAL AT ANY OF THE LICENSED LLRW DISPOSAL FACILITIES?

☒ NO

☐ YES Complete the rest of this question

1 COMPLETE TABLE 9:

Class	Volume (Ft ³)	Total Activity (Units)	Activity by Radionuclide (Units)	Description

2 PLEASE STATE THE REASON THIS LLRW IS KNOWN OR BELIEVED TO BE UNACCEPTABLE FOR DISPOSAL AT ANY OF THE LICENSED LLRW DISPOSAL FACILITIES

D PLEASE ESTIMATE HOW MANY MONTHS YOU COULD STORE YOUR LLRW AT YOUR FACILITIES WITHOUT DISRUPTION OF YOUR ACTIVITIES WHICH RESULT IN THE GENERATION OF LLRW SHOULD YOU BE UNABLE TO TRANSFER YOUR LLRW FOR DISPOSAL

Months

SECTION IV Five-Year Estimates

A PLEASE COMPLETE TABLE 10 WITH YOUR BEST ESTIMATES OF THE LLRW YOU EXPECT TO TRANSFER TO LICENSED LLRW DISPOSAL FACILITIES IN EACH OF THE FIVE YEARS SUBSEQUENT TO THIS REPORTING PERIOD

		Volume (Ft ³)	Activity (Units)	Radionuclides
1987	Class	A		
		B		
		C		
		Total		
1988	Class	A		
		B		
		C		
		Total		
1989	Class	A		
		B		
		C		
		Total		
1990	Class	A		
		B		
		C		
		Total		
1991	Class	A		
		B		
		C		
		Total		

SIGNATURE OF PREPARER (See Section I Part D)

DATE MONTH DAY YEAR

Donald J. Hansen

062387

UCCNHT0003215

(See Section II, Part C)

FACILITY (From Section I, Part A)

CITY (From Section I, Part A)

ACTIVITY (ACT) IS IN (Specify unit)

Mercury

CLASS A

TOTAL VOLUME	TOTAL ACT
150 Ft ³	2.14

THESE FIGURES SHOULD AGREE

VIA	BROKER OR AGENT NAME	TO	BARNWELL		RICHLAND		BEATTY		TOTAL VOLUME	TOTAL ACT
			VOLUME	ACT	VOLUME	ACT	VOLUME	ACT		
	Chem-Nuclear Systems, Inc.		150	2.14						
	DIRECT TRANSFER									
TOTALS:			150	2.14					150	2.14

ENTER THE VOLUME OF CLASS-A WASTE THAT MET
10 CFR 61.56(b) STABILITY REQUIREMENTS

Ft³

IF NONE CHECK HERE ☐

CLASS B

TOTAL VOLUME	TOTAL ACT
Ft ³	

THESE FIGURES SHOULD AGREE

VIA	BROKER OR AGENT NAME	TO	BARNWELL		RICHLAND		BEATTY		TOTAL VOLUME	TOTAL ACT
			VOLUME	ACT	VOLUME	ACT	VOLUME	ACT		
	DIRECT TRANSFER									
TOTALS:										

CLASS C

TOTAL VOLUME	TOTAL ACT
Ft ³	

THESE FIGURES SHOULD AGREE

VIA	BROKER OR AGENT NAME	TO	BARNWELL		RICHLAND		BEATTY		TOTAL VOLUME	TOTAL ACT
			VOLUME	ACT	VOLUME	ACT	VOLUME	ACT		
	DIRECT TRANSFER									
TOTALS:										

TOTALS FOR ALL CLASSES

TOTAL VOLUME	TOTAL ACT
150 Ft ³	2.14

ENTER THE SUMS OF
CLASSES A, B AND C

(See Section II, Part C)

FACILITY (From Section I Part A)

CITY (from Section I, Part A)

[illegible]

(See Section II, Part J)

CITY (From Section I Part A)

UCCNHT0003218